

# The Power of Shortcuts in Excel

Making the Most out of Excel

# Forward and Backward Referencing

- ❖ Calculations are done from the left side to the right side.
- ❖ You have to keep your independent values to the left of the dependent values.
- ❖ This is what's called “Forward Referencing”
- ❖ The Opposite of it is “Backward Referencing”

A screenshot of a Microsoft Excel spreadsheet. The table has columns A through G. Row 1 contains "Product of List 1" in A and "3628800" in B. Row 2 contains "Sum of List 1" in A and "55" in B. Row 3 contains "Average of List One" in A and "5.5" in B. Row 4 contains "Median of List 1" in A and "5.5" in B. Row 5 is empty. Row 6 contains "List 1" in A and "1" in B. Row 7 contains "2" in B. Row 8 contains "3" in B. Row 9 contains "4" in B. Row 10 contains "5" in B. Row 11 contains "6" in B. Row 12 contains "7" in B. Row 13 contains "8" in B. Row 14 contains "9" in B. Row 15 contains "10" in B. A large black arrow points from the right towards the left, indicating the direction of referencing. A red box at the bottom with the text "Backward Referencing" is positioned below the arrow.

A	B	C	D	E	F	G
1 Product of List 1	3628800			List 1		
2 Sum of List 1	55			1		
3 Average of List One	5.5			2		
4 Median of List 1	5.5			3		
5				4		
6				5		
7				6		
8				7		
9				8		
10				9		
11				10		
12						
13						
14						

A screenshot of a Microsoft Excel spreadsheet. The table has columns A through F. Row 1 contains "List 1" in A and "Product of List 1" in E. Row 2 contains "1" in B and "3628800" in F. Row 3 contains "2" in B. Row 4 contains "3" in B. Row 5 contains "4" in B. Row 6 contains "5" in B. Row 7 contains "6" in B. Row 8 contains "7" in B. Row 9 contains "8" in B. Row 10 contains "9" in B. Row 11 contains "10" in B. A large black arrow points from the left towards the right, indicating the direction of referencing. A red box at the bottom with the text "Forward Referencing" is positioned below the arrow.

A	B	C	D	E	F
1 List 1				Product of List 1	3628800
2	1			Sum of List 1	55
3	2			Average of List One	5.5
4	3			Median of List 1	5.5
5	4				
6	5				
7	6				
8	7				
9	8				
10	9				
11	10				
12					
13					
14					

# Keeping it All Together

- ❖ Keep Everything in One Workbook.
- ❖ It takes time to calculate a workbooks when it is linked to other workbooks.
- ❖ To minimize it: Open the linked workbooks THEN open the linking workbook to improve performance.

# Keeping it All Together

- ❖ Keep Everything in one sheet.
- ❖ It also takes time from excel to reference other sheets.
- ❖ If you have already spread your work across other sheets, it is not really worth rearranging it in one sheet.
- ❖ Keep this tip in mind for the future sheets you plan.

# Cleaning Things Up!

- ❖ Cleaning your workbook up is very helpful especially if you are dealing with thousands of rows and columns.
- ❖ Remove Everything you no longer use in your workbook.
- ❖ Don't forget to create a backup before deleting!

# Copying and Pasting as Values

- ❖ It's is a general practice to use formulas all over the workbook.
- ❖ This could slow down the workbook.
- ❖ You can covert formulas to values by copying and then pasting special as values.

# Avoiding Repeated Volatile Functions

- ❖ Volatile Functions update every time the workbook is changed.
- ❖ This would cause a slow down if there was hundreds of volatile functions applied over thousands of rows and columns.
- ❖ Examples of volatile functions are RAND(), RANDBETWEEN(), NOW(), TODAY(), OFFSET(), CELL(), and INDIRECT().

# Limit Conditional Formatting

- ❖ Conditional Formatting is the most helpful tool you could use in excel!
  - ❖ Excel has to evaluate the conditions applied every time you make a change in the workbook.
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- ❖ It is advisable:
    - 1- To Limit the use of conditional formatting to the minimum:
    - 2- To Remove the conditional formatting for the cells you no longer need.
    - 3- To make simple formatting changes instead of complex ones.

# Using Binary Format

❖ Saving in Binary Format has so many different advantages.

1- Faster reading and writing.

2- Smaller File Size.

❖ Comparison:

1- .xlsx takes 4 times longer than .xlsb to load

2- It saves 2 times slower.

3- It has 1.5 times bigger file.

# Using Binary Format

Comparison	.xlsx	.xlsb
Loading Time	165 Seconds	43 Seconds
Saving Time	115 Seconds	61 Seconds
File Size	91 MB	65 MB

# Reduce Pivot Tables

- ❖ Pivot Tables could be very helpful for data manipulation.
- ❖ It is recommended to use pivot tables instead of functions if you want to create a summary of a database you have.
- ❖ To Maximize the workbook performance:
  - 1- If you don't need the Table, delete it.
  - 2- If you need the table as values only, then convert the table to text.
  - 3- If you need the table as is, then move all the tables to a separate workbook instead of having them all in one workbook.
- ❖ You won't notice it if you are dealing with a couple of tables only.

# Keystroke Shortcut - Overview

- ❖ File Shortcuts
- ❖ Ribbon Bar Shortcuts
- ❖ General Shortcuts
- ❖ Navigation Shortcuts
- ❖ Selection Shortcuts
- ❖ Extended Selection Shortcuts
- ❖ Entering Data Shortcuts
- ❖ Grid Operations Shortcuts
- ❖ Pivot Tables Shortcuts
- ❖ Workbook Shortcuts
- ❖ Other Shortcuts